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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,388	07/18/2003	Satoshi Okamoto	Q76473	2458

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EXAMINER

JACKSON, MONIQUE R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,388

Applicant(s)

OKAMOTO ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03 & 2/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in line 3, "by" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "a structural unit of the following formula (ii)" however there is insufficient antecedent basis for this limitation in the claim considering the claim recites formula (II), "(ii)" should be changed to (II). Further, Claim 1 includes a parenthetic expression that renders the claim indefinite because it is unclear whether the limitations within the parenthesis are part of the claimed invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 2, 5, and 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Okamoto et al (USPN 6,797,345.) Okamoto et al teach an aromatic liquid-crystalline polyester metal laminate obtained by dissolving an aromatic liquid-crystalline polyester in an organic solvent to obtain a solution, casting the solution and removing the solvent to give a film, and laminating the film with a metal layer, preferably a copper layer, when the laminate is utilized to produce a printed wiring board (Abstract, Col. 8, lines 34-37; Claim 4, Claim 7.) Okamoto et al teach that the aromatic liquid-crystalline polyester is formed from a combination of aromatic dicarboxylic acid such as B1 or instantly claimed formula IV and B3 or instantly claimed formula III (Col. 3, line 28-Col. 4, line 10), aromatic diol such as C1 or C3 which read upon instantly claimed formula II (Col. 4, lines 14-65), and aromatic hydroxycarboxylic acid such as A1 or instantly claimed formula I (Col. 2, lines 55-Col. 3, line 25); or from different kinds of aromatic hydroxycarboxylic acids, or a combination of aromatic dicarboxylic acid and aromatic diol. (Col. 2, lines 15-33.) Okamoto et al teach that the polyester preferably contains repeating units of formula A in an amount of at least 30mol% from the standpoint of balance of heat resistance and mechanical property and may be various combinations of the structural units disclosed (Col. 5, lines 15-33.) Okamoto et al teach that from the standpoint of liquid-crystallinity, the polyester is preferably formed from 30 to 80 mol% of a repeating unit derived from p-hydroxybenzoic acid, 10 to 35mol% of a repeating structural unit derived from at least one compound selected from the group of hydroquinone, resorcinol, 4,4'-dihydroxybiphenyl, bisphenol A and bisphenol S, and 10 to 35mol% of a repeating structural unit derived from the group consisting of terephthalic acid, isophthalic acid and naphthalenedicarboxylic acid (Col. 5, lines 33-43; Claim 2.)

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The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. The teachings of Okamoto et al are discussed above, though Okamoto et al teach all the structural units instantly claimed, Okamoto et al do not specifically teach that the polyester is formed from the instantly claimed combination having the mole % and ratios as instantly claimed, however, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum amount of each structural unit to provide the desired heat resistance, liquid crystallinity and mechanical properties for a particular end use wherein it is well established in the art that the amount of each structural unit is a result-effective variable affecting these properties of the resulting liquid-crystalline polyester as taught by Okamoto et al.

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Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 7 of U.S. Patent No. 6,797,345. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any combination of the claimed structural units for the aromatic liquid-crystalline polyester, which read upon the instantly claimed structural units, wherein one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum amount of each structural unit to provide the desired heat resistance, liquid crystallinity and mechanical properties for a particular end use wherein it is well established in the art that the amount of each structural unit is a result-effective variable affecting these properties of the resulting liquid-crystalline polyester.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson
Primary Examiner
Technology Center 1700
April 18, 2005